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### **EUROPEAN PATENT APPLICATION**

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- (54) Methods for generating polynucleotides having desired characteristics by iterative selective and recombination
- (57) The present invention relates to a method for evolving a polynucleotide encoding a piurality of genes, e.g. multiple genes forming a multicomponent pathway. The method involves shuffling of polynucleotides by conducting a polynucleotide amplification process on overlapping segments of a population of variants of a polynucleotide encoding a plurality of genes under conditions whereby one segment serves as a template for extension of another segment to generate a population of recombinant polynucleotides. This population is screened for a recombinant polynucleotide encoding a plurality of genes having a desired property.

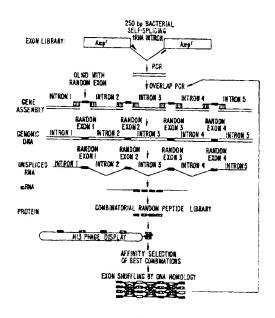


FIG. 20.



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